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10/585,224	06/30/2006	Robert Koppensteiner	KOPPENSTEINER-2 PCT	9365	
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1077 NORTHERN BOULEVARD			TOLAN, EDWARD THOMAS		
ROSLYN, NY 11576			ART UNIT	PAPER NUMBER	
			3725		
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Paper No(s)/Mail Date

3) Information Disclosure Statement(s) (PTO/SB/08)

6) Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kralowetz (3,753,365) in view of Staat et al. (4,928,507). Kralowetz discloses a method and apparatus for forming a hollow body workpiece (13) by swaging using diametrically opposed forging tools (1). An upstream chuck (24) is shaped with a face side stop for the work (fig. 3). The chuck is rotatably and axially driven (col. 3, lines 15-20). A mandrel (28) is axially displaceable by means of an actuator (27) on a side of the forging tools (1) opposite of the chuck. The chuck has a pressing cylinder (22) for the workpiece (13). The mandrel is displaceable axially in a reciprocating fashion via its actuator (27) depending upon the movement of the chuck (col. 3, lines 29-31 and 45-48). The mandrel has graduated diameter sections comprising a tip (28') and shoulder (28"). Regarding claim 1, the workpiece (13) is pressed with a force against the mandrel (28) by piston (23) and the mandrel is advanced by actuator (27). The force is predeterminable by pressure regulating valve (26). Regarding claims 8 and 9, Kralowetz discloses two chucks (24,12), cylinder (14) having sleeve (10) driven by a motor (11) for chuck (12) and hydraulic cylinder (22) for chuck (24). Kralowetz does not disclose that the mandrel pierces the hollow body. Staat teaches piercing mandrel (17)

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that penetrates into a space in a chuck (18) holding a workpiece (15) as the workpiece is advanced by the chuck into forging tools (12,13). It would have been obvious to one skilled in the art at the time of invention to pierce and form the work of Kralowetz as taught by Staat in order to process hollow bodies in a single operation from a solid blank. Piercing mandrels have predictable results as known in the forging/swaging arts and a tipped mandrel of Kralowetz can be used to pierce in a known method as taught by Staat. "the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results" KSR Int'l Co. v Telflex Inc., 127 S. Ct. 1727,1742, 82 USPQ 2d 1395,1396 (2007).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kralowetz in view of Staat and further in view of Inoue (5,088,311). Kralowetz in view of Staat does not disclose a centric depression. Inoue teaches (fig. 1) a centric depression (102) in a workpiece (101). It would have been obvious to one skilled in the art at the time of invention to provide the workpiece of Kralowetz in view of Staat with a depression as taught by Inoue in order to reduce an initial piercing pressure.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to Ed Tolan whose telephone number is 571-272-4525. FAX communications should be sent to 571-273-8300.

EDTOLAN RY EXAMINER

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